



Technologies, Inc. (“BFG”), EVGA Corporation (“EVGA”), Diamond Multimedia Systems, Inc. (“Diamond”), PNY Technologies, Inc. (“PNY”), and Eastcom, Inc. d/b/a XFX Technology USA (“Eastcom”), also alleging infringement of the ’631 patent.

Three days later on October 9, 2008, Plaintiff initiated a third patent infringement lawsuit against LG Electronics, Inc. (“LG”), Mitsubishi Digital Electronics America, Inc. (“Mitsubishi”), Samsung Electronics America, Inc. (“Samsung”), Sim2 USA, Inc. (“Sim2”), and Toshiba America Consumer Products, LLC (“Toshiba”), also alleging infringement of the ’631 patent. Plaintiff alleges that Defendants infringe all claims of the ’631 patent.

The three cases were referred to United States Magistrate Judge Craven for all pretrial proceedings including claim construction. *See* Order of Mar. 3, 2009, Dkt. No. 50. Judge Craven held a claim construction hearing on February 9, 2010 and subsequently issued a claim construction opinion (“*Markman* Order”) on April 20, 2010. Dkt. Nos. 102 (hearing transcript) & 104 (Order). Plaintiff now objects to the Magistrate Judge’s claim construction with respect to five terms:

1. “top plate” (claim 2);
2. “bonded to a said second surface” (claim 2);
3. “relative spaced relation” (claim 2);
4. “thermally conductive planar member” (claim 3); and
5. “in intimate contact with said second surface” (claim 3)

Dkt. No. 105-1 at 1. Plaintiff brings a general objection to the constructions of four of these terms based on purported legal errors applicable to the constructions as a whole, rather than on a term-by-term basis. Dkt. No. 105 at 24.

## II. REVIEW

In a separate pleading, Defendants object to Plaintiff's objections to the Magistrate Judge's order arguing that the parties consented that Judge Craven preside over the *Markman* hearing thereby rendering ICHL's objections improper. Dkt. No. 106 at 2. In the alternative, Defendants argue that the proper recourse under the Local Rules is a motion for reconsideration and not objections. *Id.* Plaintiff responds that the district court retains jurisdiction to consider its objection to the *Markman* Order because it is a non-dispositive ruling governed by Federal Rule of Civil Procedure 72(a), which allows a party to "serve and file objections." Dkt. No. 108 at 2.

This Court reviews a magistrate judge's non-dispositive orders pursuant to Federal Rule of Civil Procedure 72(a). Because claim construction is a matter of law, this Court can review a magistrate judge's claim construction *de novo*. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996); *cf. Barrow v. Greenville Indep. School Dist.*, 202 F.R.D. 480, 482 (N.D. Tex. 2001) (regarding magistrate judge's decision concerning leave to take depositions, noting that "[t]he 'clearly erroneous' standard applies to the factual components of the magistrate judge's decision" but that "[t]he magistrate judge's legal conclusions are freely reviewable").

## III. LEGAL PRINCIPLES OF CLAIM CONSTRUCTION

A determination of patent infringement involves two steps: first, the patent claims are construed, and, second, the claims are compared to the allegedly infringing device. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998) (en banc). The legal principles of claim construction were reexamined by the Federal Circuit in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). The Federal Circuit in Phillips expressly reaffirmed the

principles of claim construction as set forth in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996), *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996), and *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111 (Fed. Cir. 2004). Claim construction is a legal question for the courts. *Markman*, 52 F.3d at 979.

#### IV. DISCUSSION

**A. “Top plate,” “bonded to a said second surface,” “thermally conductive planar member,” and “in intimate contact with said second surface”**

*1. Parties’ Positions*

Plaintiff argues that the *Markman* Order’s constructions of the terms “top plate” and “bonded to a said second surface” in claim 2 and “thermally conductive planar member” and “in intimate contact with said second surface” in claim 3 erroneously exclude structures properly within the scope of the patent-in-suit. Dkt. No. 105 at 5. According to Plaintiff, the constructions exclude any heat sink in which the bond between the fin structures and top plate is an integral bond. Plaintiff bases its argument on the fact the claims of the ’631 patent relate to a structure and not a process such that the patent “must be viewed as defining a structural relationship between elements, not the process used to create that relationship.” *Id.* at 5-6.

Plaintiff argues that the exclusion of integrally-bonded heat sinks is inconsistent with the claim language and such heat sinks were never disavowed by the inventor. *Id.* at 8. Plaintiff contends that the claims’ requirement that the fin structures be bonded to the top plate suggests that the bonds can be integral bonds such as chemical or metallurgical bonds. *Id.* Plaintiff adds that “[n]ot only does the plain meaning of ‘bonded’ suggest that integral bonds are (at least)

permissible, but the Inventor never clearly disavowed the broad meaning of ‘bonded.’” *Id.*

Plaintiff concedes that the inventor criticized the extrusion process but argues that such criticism 1) was never purported to extend to other processes such as dip brazing and 2) did not rise to the level of a disavowal. *Id.* at 8-9.

Plaintiff also argues that exclusion of integrally-bonded heat sinks contradicts embodiments described in the specification. *Id.* at 10. Specifically, Plaintiff claims that the *Markman* Order is inconsistent with dip-brazing, which the specification endorses. *Id.* at 11. Plaintiff argues that while “the dip brazing *process* involves the use of heat and filler material to join previously separated pieces of metal[,] . . . the resulting dip brazed *structure*, unlike ‘glued’ products, does not consist of distinct pieces held together by an intermediate bonding structure.” *Id.* (emphasis in original). Plaintiff also disagrees with the Magistrate Judge’s conclusion that the *Markman* Order is consistent with dip brazing. *Id.* at 12-13. Specifically, Plaintiff submits that the while dip brazing involves taking two parts and attaching them, the structure that is produced through dip brazing cannot be described as “two separate parts that are attached.” *Id.* at 14. Plaintiff also contends that the *Markman* Order does not accord with the preferred embodiment’s employment of integral protrusions. *Id.* at 15.

The -065 and -175 Defendants respond that the Magistrate Judge’s constructions agree with the plain language of the claims and “were directed to describing the structural relationship between the components of the invention.” Dkt. No. 107 at 3. Defendants argue that the “second surface” element of claims 2 and 3 foreclose Plaintiff’s dip brazing argument. *Id.* at 4. Specifically, Defendants submit that extruded or die cast heat sinks do not have a “second surface” that receives fin structures or that is bonded to the fin structures. *Id.* at 5. Defendants

also submit that the *Markman* Order does not exclude heat sinks formed by dip brazing. *Id.*

In a separate pleading, the -177 Defendants argue that Judge Craven's construction of the terms in claim 3 of the '631 patent – the only claim asserted against the -177 Defendants – is proper as to the 'intimate contact' element. Dkt. No. 113 at 3-4. Specifically, the -177 Defendants submit that the Magistrate Judge's construction comports with claim language as well as the specification. *Id.* at 4-5.

In its reply, Plaintiff reiterates its argument that the dip-brazed embodiment shows that the *Markman* Order's exclusion of integrally-bonded heat sinks is legal error. Dkt. No. 109 at 2.

## *2. Discussion*

The Magistrate Judge found that extruded or integrally bonded heat sinks did not fall within the scope of the '631 patent. Dkt. No. 104 at 11-18. Plaintiff contends that this conclusion does not accord with the claims and specification of the '631 patent. After *de novo* review, Plaintiff's arguments lack merit, and the Magistrate Judge's constructions should not be disturbed.

It is a "bedrock principle" of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude, that is, the words of the claims themselves define the scope of the invention. *Phillips*, 415 F.3d at 1312. Because the patentee is required to define precisely what his invention is, it would be unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms. *Id.* Claim 2 of the '631 patent recites:

2. A heat sink assembly of the type receiving an electrical component in intimate engagement for dissipating heat generated by such component, such heat dissipation being promoted by

forced air flow through the assembly; the assembly comprising:

a top plate having a first surface for receiving said component and a second surface for receiving fin structures;

a plurality of fin structures each bonded to said second surface of said top plate and extending therefrom;

at least two of said fin structures being in relative spaced relation to form an air inlet path therebetween whereby an air flow into said inlet between said two fin structures is divided, with a respective portion of said air flow being directed through each of said two fin structures; and

a cover plate partially enclosing said fin structures and having an opening adjacent said air inlet;

wherein said top plate is of a rectangular shape and each of said fin structures is of an elongated rectangular shape.

Plaintiff's arguments fail in light of the plain language of the claims. First, the "top plate" must have a "first surface" for receiving the electrical component and a "second surface" for receiving fin structures. As the Magistrate Judge found, if the patent included extruded heat sinks, there would be no "second surface for receiving fin structures." Dkt. No. 104 at 14. Second, the fin structures must be "bonded to said second surface." While this indeed an overall structural claim, the plain language of the claim thus requires the fin structures to have been bonded to the second surface of the top plate. Nothing in the claims or the specification indicates that the inventor used the terms bonded or receiving in a novel way or intended to impart a novel meaning to them. Accordingly, the plain language of the claims dictates that extruded or integrally bonded heat sinks fall outside the scope of the '631 patent. Had the patentee, "who was responsible for drafting and prosecuting the patent, intended something different, it could have prevented this result through clearer drafting." *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d

948, 951 (Fed. Cir. 1993).

Plaintiff argues that the Magistrate Judge's construction improperly imports process limitations that do not exist in these structural claims. On one hand, Plaintiff correctly points out that district courts should avoid reading process features into apparatus claims. *See Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1344 (Fed. Cir. 2008) (“[T]he process by which a product is made is irrelevant to the question of whether that product infringes a pure apparatus claim.”). On the other hand, a claim term can have functional attributes and still recite a structural component, albeit one possessed with certain understood characteristics. *Miken Composites, L.L.C. v. Wilson Sporting Goods Co.*, 515 F.3d 1331, 1337-1338 (Fed. Cir. 2008). In this case, unlike *Baldwin* and similar cases, the independent claims are strictly apparatus claims, which obviates any risk of blurring differences between two different classes of patentable subject matter. Moreover, a person of ordinary skill in the art would understand from the claims that the top plate has two surfaces and that the fin structures have been bonded to the second surface. A person of ordinary skill in the art would also understand that such a structure would not include an extruded heat sink, which would lack “a second surface for receiving fin structures.”

Additionally, a person of ordinary skill in the art reads the claim terms not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification. *Phillips*, 415 F.3d at 1313. In other words, the claims “must be read in view of the specification, of which they are a part.” *Id.* at 1315. Here, the specification of the '631 patent supports the Magistrate Judge's construction. First, the specification repeatedly describes the fin structures as “bonded” or “mounted” to the top plate.



See '631 patent at col. 4, ll. 15-19, 27-31, and 37-39. Taken in this context, it is clear that the heat sink assembly of claims 2 and 3 requires the fin structures to be bonded to the "top plate" and cannot be the result of an extrusion process. See *Honeywell Int'l v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006) (limiting term "fuel injection system component" to that supported by the written description); see also *Finisar Corp. v. DirecTV Group Inc.*, 523 F.3d 1323, 1330 (Fed. Cir. 2008) (rejecting broader construction of "information database" in light of claims and specification).

Second, the inventor disparaged the extruded structures of the prior art as being unable to achieve optimal parameters. '631 patent at col. 1 ll. 38-42 ("Thus far however, fabrication costs have precluded general use of such ideal fins and conventional extruded structures have prevailed where fin thickness, spacing and orientation are all constrained to non-optimal values."). In some cases, the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor. *Phillips*, 415 F.3d at 1316. A clear disavowal does not demand an "expression of manifest exclusion," but where the general summary or description of the invention describes a feature of the invention and criticizes other products that lack that same feature, this operates as a clear disavowal of these other products. *Astrazeneca AB v. Mutual Pharm. Co.*, 384 F.3d 1333, 1339 (Fed. Cir. 2004). Here, the patentee disparaged extruded structures in the "Background Art" section of the '631 patent. This statement alone may not rise to the level of a clear and unmistakable disavowal of claim scope; however, taken in conjunction with the claims and the remaining specification, it is clear that extruded structures were not within the scope of the patent. Cf. *Honeywell*, 452 F.3d at 1318 (finding disavowal of carbon fibers from the scope of patent claims based on the disclosure in the written description, which demeaned the properties

of carbon fibers).

Plaintiff argues that the *Markman* Order's construction does not accord with the patent's use of "integral" protrusions in one of the preferred embodiments. Dkt. No. 105 at 15. Plaintiff refers to the third embodiment described in the patent:

[T]he third embodiment heat sink assembly 30 of the present invention comprises a primary structure 32 which includes a top plate 33 similar to that of FIG. 1, but which also includes a plurality of fin supports 34 which extend integrally from and perpendicular to the top plate 33 to form a plurality of vertical channels. Plate 33 and supports 34 may, for example, be made of copper or aluminum.

'631 patent at col. 5 ll. 47-53. The first two embodiments lack the fin supports present in this third embodiment. These integral protrusions are not fin structures, but fin supports. Dependent claims 9, 10, and 11, which depend from claim 3, recite a plurality of fin supports extending from the planar member of independent claim 3. The *Markman* Order's construction properly resolve the parties' dispute as to the relationship between the "fin structures" and the "thermally conductive planar member" in claim 3. The *Markman* Order's constructions do not address the fin supports. This silence is, however, not fatal. Different claims may be directed to and cover different disclosed embodiments. *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1383 (Fed. Cir. 2008). Here, claim 3 does not include a "fin support" element, and purportedly reads on the first two embodiments as construed. Claims 9, 10, and 11 add separate "fin support" elements that extend from the planar member and read on the third embodiment. The *Markman* Order construed "thermally conductive planar member" in the context of claim 3 and resolved the dispute as to claim 3. The patentee chooses the language and the scope his

claims. *Id.*<sup>1</sup>

Plaintiff also argues that the Magistrate Judge's construction is inconsistent with the '631 patent's disclosure of dip brazing as a means by which the fin structures are bonded to the top plate. Plaintiff argues that dip brazing produces an integral bond, and as such, dip brazed heat sinks are excluded under the *Markman* Order's construction. Dkt. No. 105 at 3. The Court disagrees.

The term "dip brazing" is used in the Abstract's final sentence, which discusses the bondant that can be used to bond the fin structures to the top plate or the fin supports. The Abstract states in relevant part: "A high thermal conductivity bondant, such as metal-filled epoxy, may be used to bond the fin structures to either the plate or the fin supports. Dip brazing and soldering may also be employed depending upon the materials selected." Dip brazing, like soldering, typically implicates joining two separate pieces of metal using another metal or alloy. Contrary to Plaintiff's argument, the Magistrate Judge appreciated "dip brazing" as a means for bonding the fin structures to the plate and properly found that a person of ordinary skill in the art would consider dip brazing akin to soldering or use of other bondant to join two separate pieces. Dkt. No. 104 at 16. Accordingly, the *Markman* Order does not exclude dip brazing from the scope of the '631 patent.

Plaintiff also argues that practical considerations support adopting its proposed constructions. Dkt. No. 105 at 3. ("[A]ny claim construction which excludes integrally bonded heat sinks would impose a crippling manufacturing process limitation that would relegate the

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<sup>1</sup> It should be noted that Plaintiff's proposed construction for "thermally conductive planar member" similarly fails to address "fin supports."

'631 patent to near irrelevancy.”). This argument is unavailing. Commercial embodiments, commercial significance, or other practical implications of a court’s construction should not influence claim construction. *See SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1339-1340 (Fed. Cir. 2005) (rejecting district court’s construction of claim term that included a limitation of “commercially significant amount”); *Cf. NeoMagic Corp. v. Trident Microsystems, Inc.*, 287 F.3d 1062, 1073-1074 (Fed. Cir. 2002) (claims may not be construed with reference to the accused device).

In sum, the specification is the single best guide to the meaning of a disputed term, and in this case, the specification amply supports the constructions of the terms “top plate” and “bonded to a said second surface” in claim 2 and “thermally conductive planar member” and “in intimate contact with said second surface” in claim 3.

**B. “relative spaced relation”**

*1. Parties’ Positions*

Plaintiff argues that the *Markman* Order’s construction of “relative spaced relation” in claim 2 improperly requires that the fin structures stand in “parallel-spaced” relation to each other. Dkt. No. 105 at 23. Plaintiff contends that the “parallel” requirement is not as broad as the inventor’s choice of “relative.” *Id.* at 23-24. Plaintiff submits, “All Claim 2 requires is that the relative positioning must form a gap into which air can be directed and then divided into the respective fin structures.” *Id.* at 24. Plaintiffs add that there is no reason why another embodiment using a differently shaped inlet would not be allowed to use a gap with a different shape. *Id.*

Defendants respond that the Magistrate Judge properly construed “relative spaced

relation.” Dkt. No. 107 at 6. Defendants argue that Plaintiff’s proposed construction would be so broad as to render the term ambiguous and meaningless. *Id.* Defendants maintain that “Judge Craven’s construction properly prevents such outcomes.” *Id.* Defendants also argue that the cautionary language Plaintiff points to for support is boilerplate and that the totality of the specification demonstrates that the fin structures are positioned parallel to each other. *Id.* at 7-8.

Plaintiff replies that Defendants’ position flies in the face of *Phillips* and its progeny. Dkt. No. 109 at 10. Specifically, Plaintiff argues that the fact that the drawings depict a parallel arrangement does not sufficiently support including a parallel limitation into the construction. *Id.*

## *2. Discussion*

During claim construction, Plaintiff proposed construing “being in relative spaced relation” to mean “separated from each other.” Dkt. No. 104 at 28. Defendants proposed, “positioned apart and parallel to each other, such that an unoccupied space extending from the second surface is formed between the fin structures.” *Id.* at 28-29.

The Magistrate Judge reasoned that all the embodiments in the ’631 patent describe fin structures positioned in a parallel orientation. *Id.* at 30. The Magistrate Judge noted that the ’631 patent’s description applied to the invention as a whole, and that “[p]ositioning the fin structures at any position other than parallel to each other would hinder the stated goal of the ’631 patent.” *Id.* Additionally, the Magistrate Judge dismissed the cautionary language preceding the claims as “boilerplate” and entitled to no weight. *Id.* at 30-31. Accordingly, the Magistrate Judge agreed with Defendants that Plaintiff’s proposed construction would open the door to a seemingly infinite number of spatial orientations, and construed the term to mean “positioned apart from and parallel to each other such than an unoccupied space is formed

between the fin structures.” *Id.* at 31.

In some instances, a patent specification describes the patented invention as a whole and can serve to limit the scope of the claims. *See, e.g., SciMed Lifesystems, Inc. v. Advanced Cardiovascular Systems, Inc.*, 242 F.3d 1337, 1343 (Fed. Cir. 2001) (concluding that characterization of one structure as part of the “present invention” is strong evidence against reading the claims to encompass the opposite structure). In other instances, the specification as a whole may serve to limit the claims by repeatedly characterizing the invention in a specific manner. *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 692-693 (Fed. Cir. 2008).

Use of the phrase “the present invention” does not automatically limit the meaning of claim terms in all circumstances. *Netcraft Corp. v. eBay, Inc.*, 549 F.3d 1394, 1398 (Fed. Cir. 2008). Instead, such language must be read in the context of the entire specification. *Id.* In this case, the specification describes the orientation of the fin structures as “parallel” while discussing Figure 1 in the “Detailed Description of the Invention.” ’631 patent at col. 4 ll. 27-31. The patent also repeatedly refers to Figures 1, 2, and 3 as representing the heat sink assembly of the present invention. *See, e.g.*, ’631 patent at col. 4 ll. 12-15, 24-26, and 40-42. These figures show fin structures in a parallel arrangement. Contrary to Plaintiff’s arguments, these statements are not descriptions of particular embodiments improperly imported into the claims. Rather, they constitute characterizations directed to the invention as a whole. *Netcraft*, 549 F.3d at 1399; *see also Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1367 (Fed. Cir. 2007) (finding that portions of the specification described the critical aspects of the invention not just embodiments). To be sure, the embodiments in the ’631 patent generally relate to the geometry of the fin structures. *See* ’631 patent at col. 5 ll. 38-43 (“It will be noted that the first and second

embodiments of the present invention differ only in the detailed geometry of the fin structure, but are essentially identical in all other respects conforming substantially to the conceptual illustration of FIG. 1.”). The third embodiment also has parallel orientation of the fin structures despite adding fin supports. *Id.* at col. 5 ll. 47-53. Accordingly, the specification appropriately limits the scope of the claims.


In sum, the Magistrate Judge properly found that the specification as whole mandates that the fin structures be in a parallel relationship.

#### **V. CONCLUSION**

For at least the reasons set forth above, Plaintiff’s Objections to the Magistrate Judge’s Opinion, Dkt. No. 105, are hereby **OVERRULED**. The *Markman* Order, Dkt. No. 104, is hereby **AFFIRMED**.

**IT IS SO ORDERED.**

**SIGNED this 20th day of September, 2010.**

  
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DAVID FOLSOM  
UNITED STATES DISTRICT JUDGE